Rec 10/13/86

LIST

MATERIAL SAFETY DATA SHEET

Prepared: April 1, 1985
Revised: March 17, 1986

Identity

Substance: Calcium Hydroxide $Ca(OH)_2$
Ash Grove Snowflake, Ash Grove Kemilime, Ash Grove Slik

CAS-Number 1305-62-0

Trade Names/Synonyms: Hydrated Lime; Calcium Hydrate; Lime Water; Slaked Lime; Caustic Lime; Carboxide; Calcium Dihydroxide; Milk of Lime

Chemical Family:
Inorganic Base

Molecular Formula: CA-H2-02 MOL WT: 74.10
CERCLA Ratings (Scale 0-3): Health=1 Fire=0 Reactivity=0
Persistence=0
NFPA Ratings (Scale 0-4): Health=1 Fire=0 Reactivity=0

* Section I

Ash Grove Cement Company
8900 Indian Creek Parkway
P. O. Box 25900
Overland Park, Kansas
66225

* Section II - Hazardous Ingredients/Identity Information

	OSHA PEL	ACGIH TLV
Lime, $Ca(OH)_2$	5 mg/M^3	5mg/M_3

* Section III - Physical/Chemical Characteristics

Boiling Point	Decomposes	Specific Gravity	2.2
Vapor Pressure (mmHg)	NA	Melting Point	1076°F
Vapor Density (Air=1)	NA	Evaporation Rate (Butyl Alcohol=1)	NA
Solubility in Water	.185% @ 0° C		
Appearance and Odor	White granules or Powder; faint earthy odor		

* Section IV - Fire and Explosion Hazard Data

Flash Point (method used)	NA, not flammable		
Flammable Limits	NA	LEL: NA	UEL: NA
Extinguishing Media	NA		

Special Fire Fighting Procedures: $Ca(OH)_2$ is incombustible.
Firefighting Media:
Dry Chemical, Carbon dioxide, water spray or foam. For larger fires, use water spray, fog or alcohol foam.

Firefighting
Move container from area if possible. Do not scatter spilled material with more water than needed for fire control. Dike fire control water for later disposal.
(1984 Emergency Response Guidebook, DOT p 5800.3)

Unusual Fire and Explosion Hazards: None

* Section V - Reactivity Data

Stability: Stable under normal temperatures and pressures. It will absorb carbon dioxide when exposed to air, forming calcium carbonate.

Incompatibility (Materials to avoid)

Maleic Anhydride:	Explosive decomposition of Maleic Anhydride
Nitroparaffins:	Formation of an explosive salt
Nitromethane:	Formation of an explosive salt
Nitroethane:	Formation of an explosive salt
Nitropropane:	Formation of an explosive salt
Phosphorous:	When boiled with alkaline hydroxides yields mixed phosphines which may ignite spontaneously in air.

Water: Forms a corrosive solution

Hazardous Decomposition or by products when heated at temperatures above 580°C, the substance loses water to form calcium oxide.

Hazardous Polymerization will not occur: X

Conditions to avoid NA

* Section VI Health Hazard Data

Route(s) of Entry: Inhalation? X Skin? X Ingestion? X

Health Hazards (Acute and Chronic) & Emergency First Aid Procedures

INHALATION:
CORROSIVE.

ACUTE EXPOSURE- Inhalation of low concentrations may cause sore throat, coughing, choking, dypsnea, and variable symptoms of headache, dizziness, and weakness. Intense exposures may result in tightness in the chest and delayed pulmonary edema. The solubility of the substance allows further penetration that may continue for several days.

CHRONIC EXPOSURE- Bronchial irritation with chronic cough and frequent attacks of bronchial pneumonia are common.

FIRST AID- Remove from exposure to fresh air immediately. If breathing has stopped, give artificial respiration. Keep affected person warm and at rest. Get medical attention.

SKIN CONTACT:
CORROSIVE.

ACUTE EXPOSURE- The substance penetrates the skin slowly, producing soft, necrotic, deeply penetrating areas on contact. The solubility allows further penetration that may continue for several days. The extent of damage depends on duration of contact.

Chronic Exposure- A chronic dermatitis may follow repeated contact.

FIRST AID- Remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15-20 minutes). In the case of chemical burns, cover the affected areas with sterile, dry dressing. Bandage securely, but not too tightly. Get medical attention.

EYE CONTACT:
CORROSIVE.

ACUTE EXPOSURE- Direct contact with the solid or aqueous solutions may cause conjunctival edema and corneal destruction. Blindness may occur.

CHRONIC EXPOSURE- Prolonged contact may cause conjunctivitis.

FIRST AID- Wash eyes immediately with large amounts of water, occasionally lifting the upper and lower lids, until no evidence of chemical remains (approximately 15-20 minutes). A near neutral solution of 0.01 to 0.05 molar sodium EDTA is helpful as an irrigant to loosen masses from tissues. Get medical attention immediately. (Grant, toxicology of the eye, volume II). Administration of drugs to the eyes should be performed by qualified medical personnel.

INGESTION:
CORROSIVE.

ACUTE EXPOSURE- Ingestion is followed by severe pain, vomiting, diarrhea, and collapse. The vomitus may contain blood and desquamated mucosal lining. If death does not occur in the first 24 hours, the patient may improve for 2-4 days and then have a sudden onset of severe abdominal pain, abdominal rigidity, and rapid hypotension indicating delayed gastric esophageal perforation.

Chronic Exposure- None known.

First Aid- Dilute by giving water or milk to drink immediately and allow vomiting to occur. As soon as possible, examine mouth and throat and irrigate injured areas with 1% acetic acid until alkali is completely neutralized. Avoid gastric lavage or emetics. These may increase the possibility of perforation.

(Dreisbach, handbook of poisoning, 11th ed.) Administration of drugs or antidote should be performed by qualified medical personnel.

ANTIDOTE:

Give calcium gluconate, 10 ML of 10% solution diluted in 1 liter of 5% glucose intravenously as necessary to maintain normal serum calcium levels. Calcium administration may cause anuria due to the precipitation of calcium oxalate in the kidney. (Dreisbach, handbook of poisoning, 11th ed.) Antidotes should be given by qualified medical personnel.

Carcinogenicity: NA NTP: NA IARC Monograph? NA
OSHA Regulated? Yes, TLV of 5 mg/M^3

Medical Conditions Generally
Aggravated by Exposure: NA

* Section VII - Precautions for Safe Handling and Use

Steps to be taken in case material is released or spilled:

SPILL AND LEAK PROCEDURES

Pick up spilled powder avoiding dusting conditions and place in a clean steel container for disposal. Safety personnel should be involved when large spills occur. Traces of residue can be flushed to the sewer, but neutralization before flushing may be required. Those involved in clean-up of spills should use protective equipment.

Precautions to be Taken in Handling and Storing

Handling: Use protective equipment as described in Section VIII.

Storing: Protect against physical damage and store in dry place away from water or moisture (NFPA 49, HAZARDOUS CHEMICALS DATA, 1975).

* Section VIII- Control Measures

PROTECTIVE EQUIPMENT

VENTILATION:
Provide Local Exhaust Ventilation or general dilution ventilation to meet permissible exposure limits.

RESPIRATOR:
HIGH LEVELS-Supplied-Air Respirator with a full facepiece, helmet, or hood. Self-contained breathing apparatus with a full facepiece.

FIREFIGHTING-Self-contained breathing apparatus with a full facepiece operated in pressure-demand or other positive-pressure mode.

CLOTHING:
Employee must wear appropriate protective clothing and equipment to prevent any possibility of skin contact with this substance.

GLOVES:
Employee must wear appropriate protective gloves to prevent contact with this substance.

EYE PROTECTION:
Employee must wear splash-proof or dust-resistant goggles to prevent contact with this substance.

Where there is any possibility that an employee's eyes may be exposed to this substance, the employer shall provide an eye-wash fountain within the immediate work area for emergency use.